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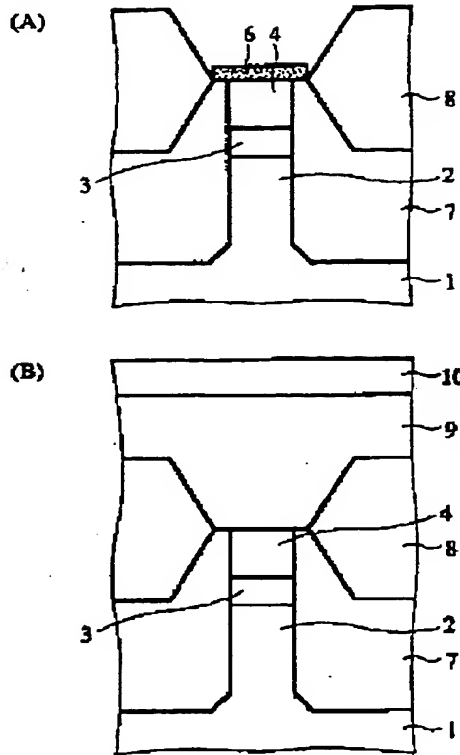
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TITLE : MANUFACTURE OF COMPOUND
SEMICONDUCTOR DEVICE



ABSTRACT : PROBLEM TO BE SOLVED: To eliminate a dry etching damaged layer without damaging the mesa side surface shape by properly selecting etchant used in growth pretreatment, when a mesa is formed by dry-etching an InP-based compound semiconductor laminate on an InP substrate, and the mesa is filled with a compound semiconductor layer containing InP, in the manufacturing method of a compound semiconductor device.

SOLUTION: A laminated structure, containing an InGaAsP based MQW active layer 3 sandwiched by an N-InP clad layer 2 and a P-InP clad layer 4, is formed on an N-InP substrate 1 whose Miller indices are (001) and etched into a mesa shape by using dry etching method. The surface of the substrate 1 containing mesa side surfaces is etched by using an acid solution containing hydrochloric acid, acetic acid and hydrogen peroxide, and a P-InP block layer 7 and an N-InP block layer 8, into which the mesa is embedded are formed.

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